Commonwealth of Kentucky

Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
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AIR QUALITY PERMIT

Permittee Name: North American Stainless

Mailing Address: 6870 US 42 East, Ghent, Kentucky 41045

Source Name: North American Stainless - Rolling and Finishing Mill

Mailing Address: Same as above. Source Location: Same as above.

Permit Type: Federally-Enforceable Title V Review Type: Title V / Synthetic Minor

Permit Number: V-97-031 (Revision 3)

Log Number: E899 (Original), F745 (Revision 1), G166 (Revision 2),

G020 (Revision 3)

Application

Complete Date: May 15, 1997 (Original), September 21, 1998 (Revision 1),

September 10, 1999 (Revision 2), November 1, 1999

(Revision 3)

KYEIS ID #: 21-041-00034 AFS Plant ID #: 21-041-00034

SIC Code: 3312

Region: CINCINNATI

County: Carroll

Issuance Date: February 27, 1998
Revision 1 Date: November 30, 1998
Revision 2 Date: November 17, 1999
Revision 3 Date: January 5, 2000
Expiration Date: February 27, 2003

John E. Hornback, Director Division for Air Quality

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SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application which was determined to be complete on November 1, 1999, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the Regulation 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

01 (S-01) - Annealing furnace - Hot AP Line:

Description:

An annealing furnace with a maximum processing rate of 56 tons of steel input per hour and a maximum natural gas usage rate of 65 mmBTU/hr.

Construction commenced - March 1992.

APPLICABLE REGULATIONS:

None.

1. **Operating Limitations:**

Natural gas usage shall not exceed 567 mm scf per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of Significant Deterioration.

Compliance may be demonstrated through monitoring and recordkeeping as specified below.

2. Emission Limitations:

None.

3. <u>Testing Requirements:</u>

None.

4. **Specific Monitoring Requirements:**

The natural gas usage shall be monitored to ensure compliance with the operating limitations listed above.

5. Specific Record Keeping Requirements:

The natural gas use shall be recorded monthly. Records shall also be maintained of the 12 month rolling period natural gas usage.

6. Specific Reporting Requirements:

Any exceedance in the 12 month rolling period natural gas usage over the limit stated in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. Following an exceedance, the company shall continue to submit the monthly gas usage at this furnace, within 30 days, for a period of at least 12 months.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (S-02) - Shot blaster - Hot AP Line:

Description:

Two Pangborn shot blasters with a capacity to process 56 tons of steel input per hour and using 218 lbs of steel shot per hour, having with a filter, with a control efficiency of 99.6%, to collect the steel dust.

Construction commenced - October 1991.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. **Operating Limitations:**

None.

2. Emission Limitations:

Particulate emissions shall not exceed 12 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The following formulas will be used in calculating the particulate emissions:

Particulate Emission Rate = Steel shot usage rate (lbs/month) x Controlled Steel (tons/month) x Particulate Emission Factor (lbs/lb of steel shot used)/ 2000 (lbs/ton)

The controlled steel particulate emission factor used shall be 0.0125 lbs/lb of steel shot used. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. <u>Testing Requirements:</u>

If the daily observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than ten occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed daily, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. A Method 9 reading by a certified visible emissions observer shall also be performed once a week, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed. The calculated particulate emissions and steel shot usage rates shall be monitored to ensure compliance.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the daily and weekly opacity measurements. Records shall also be maintained of the last ten opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of each exceedance.

Records of the calculated particulate emission rates, the steel shot usage rate, and the hours of operation shall be maintained at the source. In addition, a log of the fabric filter inspections shall be maintained at the source indicating the date of each inspection and if the filter is in proper working condition.

Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The fabric filter used as the control equipment for this emission point shall be inspected to check for possible leaks or damage. Inspection of the filter shall consist of a daily check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filters to determine whether they are in proper working condition. A leaking or damaged filter shall be replaced as soon as possible, while in compliance with General Condition F(f), Emergency Provisions, of this permit.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (S-03) - Mixed Acid Pickling - Hot AP Line:

Description:

Acid pickling of steel sheets using nitric and hydrofluoric acids with a maximum processing capacity of 56 tons of steel input per hour and using a scrubber for control of nitrogen oxides, nitric acid, and hydrofluoric acid.

Construction commenced - January 1991.

APPLICABLE REGULATIONS:

401 KAR 63:022 - New or modified sources emitting toxic air pollutants (State Origin).

401 KAR 53:010 - Ambient air quality standards (State Origin).

1. Operating Limitations:

State-Origin Operating Limitations:

Average nitric acid make-up rate shall not exceed 504,000 lbs/week - 401 KAR 63:022. Average hydrofluoric acid make-up rate shall not exceed 700 lbs/hr - 401 KAR 53:010.

2. Emission Limitations:

Nitrogen oxide emissions shall not exceed 24 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

The following formulas will be used in calculating the NO_x emissions:

 NO_x emissions rate (tons/day) = Average NO_2 concentration in exit stream (in ppm by volume) x 1.1945E-7 (lbs/cu. ft./ppm by volume) x 480,000 (cu. ft./hr) x hours of operation (hrs/day) x 0.0005 (tons/lb)

Monthly NO_x emissions rate (tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (hrs/month)

The NO₂ concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. <u>Testing Requirements:</u>

None.

4. **Specific Monitoring Requirements:**

The concentration of NO₂ in the exit stream of the scrubber, as recorded by the analyzers, shall be monitored in at least two daily sets of readings, at the beginning of each 12 hour shift, with each set consisting of three measurements taken at 5 minute intervals. The value of the average NO₂ concentration in exit stream shall be the average of two sets of data recorded. In addition, the average nitric and hydrofluoric acid make-up rates and the calculated nitrogen oxide emissions rate shall be monitored to ensure continuous compliance with the operating and emissions limitations as listed above.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**

Records shall be kept at the source of the average weekly nitric acid and hourly hydrofluoric acid make-up rates calculated from the weekly and monthly usage rates and hours of operation per week and month respectively. Records shall be kept of the average NO_2 concentration monitored as specified above. Records of the daily and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Reports of any exceedance of the operating and emissions limitations listed above shall be submitted to the Division as soon as possible per General Condition F 6 of this permit.

7. Specific Control Equipment Operating Conditions:

The scrubber shall be operated at all times that the pickling unit is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

04 (S-04) - Coil Polishing:

Description:

An Acme coil grinder with a maximum capacity of 26 tons of steel per hour having a mist collector to control particulate emissions with an efficiency of 99%.

Construction commenced - November 1991.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. Operating Limitations:

None.

2. Emission Limitations:

Particulate emissions shall not exceed 30 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = Steel processing rate (in tons of steel processed/month) x
(tons/month) Controlled Particulate Emission Factor (in lbs/ton of steel processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.2571 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed. The calculated particulate emissions and steel processing rates shall be monitored to ensure compliance with the emission limits listed above.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records of the calculated particulate emissions rate, steel processing rate, and hours of operation of this unit shall be maintained at the source. In addition, a log of the control equipment inspection shall be maintained at the source indicating the date of each inspection and if the mist collector is in proper working condition.

Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The mist collector used as the control equipment shall be inspected to ensure its proper operation. Inspection of the mist collector shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the impingement plates to determine that they are in proper working condition. The mist eliminator shall be operated at all times that the polishing unit is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

05 (S-**05**) - **Z-Mill** #**1** - **Cold Rolling Mill**:

Description:

Sedzimer Cluster Mill with a maximum processing capacity of 35 tons of steel coil per hour using 17.5 gallons of rolling oil and having a deflector filter, with a control efficiency of 95%, used to control particulate oil emissions.

Construction commenced - October 1991.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. **Operating Limitations:**

None.

2. <u>Emission Limitations:</u>

Particulate emissions shall not exceed 25 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

VOC emissions shall not exceed 100 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of Significant Deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate and VOC emission rates shall be calculated as follows:

Particulate Emission Rate = Rolling oil usage rate (in gallons/month) x Controlled

(tons/month) Particulate Emission Factor (in lbs/gallon of rolling oil used)/

2000 (lbs/ton)

VOC Emission Rate =Rolling oil usage rate(in gallons/month) x VOC Emission (tons/month) Factor(in lbs/gallon of rolling oil used) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.325 lbs/gallon of rolling oil used. The VOC emission factor used shall be 1.3 lbs/gallon of rolling oil used. These emission factors shall be replaced by the numbers calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. <u>Testing Requirements:</u>

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

The calculated particulate and VOC emissions and rolling oil usage rates shall be monitored to ensure compliance with the emission limits listed above.

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records of the calculated particulate emission rate, rolling oil usage rate, and hours of operation of this unit shall be maintained at the source. In addition, a log of the visual inspection of the filter shall be maintained at the source indicating the date of each inspection and whether the filter is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The deflector filter used as the control equipment shall be inspected to ensure its proper operation. Inspection of the deflector filter shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filters to determine whether they are in proper working condition. The filter shall be operated at all times that the rolling mill is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

06 (S-06) - Annealing furnace - Cold AP Line:

Description:

An annealing furnace with a maximum processing rate of 53 tons of steel input per hour and a maximum natural gas usage rate of 48.76 mmBTU/hr.

Construction commenced - March 1992.

APPLICABLE REGULATIONS:

None.

1. **Operating Limitations:**

Natural gas usage shall not exceed 427 mm scf per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Compliance may be demonstrated through monitoring and recordkeeping as specified below.

2. <u>Emission Limitations:</u>

None.

3. <u>Testing Requirements:</u>

None.

4. Specific Monitoring Requirements:

The natural gas usage rate shall be monitored to ensure compliance with the operating limitations listed above.

5. Specific Record Keeping Requirements:

The natural gas use shall be recorded monthly. Records shall also be maintained of the 12 month rolling period natural gas usage.

6. Specific Reporting Requirements:

Any exceedance in the 12 month rolling period natural gas usage over the limit stated in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. Following an exceedance the company shall submit the monthly gas usage at this furnace to the Division, within 30 days of the end of the month, for at least 12 months.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (S-07) - Mixed Acid Pickling - Cold AP Line:

Description:

Acid pickling of steel sheets using nitric and hydrofluoric acids with a maximum processing capacity of 53 tons of steel input per hour and using a scrubber for control of nitrogen oxides, nitric acid, and hydrofluoric acid.

Construction commenced - February 1992.

APPLICABLE REGULATIONS:

401 KAR 63:022 - New or modified sources emitting toxic air pollutants (State Origin).

401 KAR 53:010 - Ambient air quality standards (State Origin).

1. Operating Limitations:

State-Origin Operating Limitations:

Average nitric acid make-up rate shall not exceed 142,800 lbs/week - 401 KAR 63:022. Average hydrofluoric acid make-up rate shall not exceed 250 lbs/hr - 401 KAR 53:010.

2. Emission Limitations:

Nitrogen oxide emissions shall not exceed 36 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

The following formulas will be used in calculating the NO_x emissions:

 NO_x emissions rate (tons/day) = Average NO_2 concentration in exit stream (in ppm by volume) x 1.1945E-7 (lbs/cu. ft./ppm by volume) x 900,000 (cu. ft./hr) x hours of operation (hrs/day) x 0.0005 (tons/lb)

Monthly NO_x emissions rate (Tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (hrs/month)

The NO₂ concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. <u>Testing Requirements:</u>

None.

4. **Specific Monitoring Requirements:**

The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzers, shall be monitored in at least two daily sets of readings, at the beginning of each 12 hour shift, with each set consisting of three measurements taken at 5 minute intervals. The value of the average NO_2 concentration in exit stream shall be the average of two sets of data recorded. In addition, the average nitric and hydrofluoric acid make-up rates and the calculated nitrogen oxide emissions rate shall be monitored to ensure continuous compliance with the operating and emissions limitations as listed above.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**

Records shall be kept at the source of the average weekly nitric acid and hourly hydrofluoric acid make-up rates calculated from the weekly and monthly usage rates and hours of operation per week and month respectively. Records shall be kept of the average NO_2 concentration monitored as specified above. Records of the daily and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

Specific Reporting Requirements:

Reports of any exceedance of the operation and emissions limits listed above shall be submitted to the Division as soon as possible per General Condition F 6 of this permit.

7. Specific Control Equipment Operating Conditions:

The scrubber shall be operated at all times that the pickling unit is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

08 (S1) - Lime unloading:

Description:

Pneumatic unloading of lime storage bin with a maximum capacity of 1000 lbs of lime per hour and a filter, with a control efficiency of 99%, used to control particulate emissions. Construction commenced - March 1992.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. Operating Limitations:

None.

2. Emission Limitations:

Particulate emissions shall not exceed 2 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Average Particulate Emissions = Lime processing rate (in tons/month) x Controlled

Particulate Emission Factor (in lbs/ton lime processed)

/ 2000 (lbs/ton)

The controlled particulate emission factor used shall be 1.56 lbs/ton of lime processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible

emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed. The calculated particulate emissions rate, hours of operation and lime processing rate shall be monitored to ensure compliance with the emission limits listed above.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Separate records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records shall also be maintained of the calculated particulate emission rates, monthly lime processing, and the monthly hours of operation. In addition, a log of the filter inspection shall be maintained at the source indicating the date of each inspection and whether the control is in proper working condition.

Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The filter used as the control equipment shall be inspected to ensure its proper operation. Inspection of the filter shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filter to determine whether they are in proper working condition. The filter shall be operated at all times that the pneumatic unloading is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

09 (S-09) - **Boiler #1:**

Description:

Cleaver Brooks boiler with a natural gas fuel usage capacity of 36 mmBTU/hr. Construction commenced - February, 1992.

APPLICABLE REGULATIONS:

401 KAR 59:015 - New indirect heat exchangers.

1. **Operating Limitations:**

None.

2. Emission Limitations:

Particulate emissions shall not exceed 1 ton per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Sulfur dioxide emissions shall not exceed 1 ton per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity except for emissions during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations, and that a maximum of 40% opacity shall be permissible, for not more than 6 consecutive minutes in any 60 consecutive minutes, during cleaning the fire box or blowing soot.

The particulate and sulfur dioxide emission rates shall be calculated as follows:

Particulate Emission Rate = Natural gas usage rate (in million cubic feet/month)

(tons/month) x Particulate Emission Factor (in lbs particulates/million

cubic feet) / 2000 (lbs/ton)

Sulfur Dioxide Emission Rate = Natural gas usage rate (in million cubic feet/month) x

(tons/month) Sulfur Dioxide Emission Factor (in lbs sulfur

dioxide/million cubic feet) / 2000 (lbs/ton)

The particulate emission factor used shall be 5 lbs/million cubic feet of natural gas used and the sulfur dioxide emission factor used shall be 0.6 lbs/million cubic feet of natural gas used. These emission factors shall be replaced by the numbers calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the annual observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above, a stack test shall be conducted to determine the emission factor used to calculate the particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval for the test procedures. Method 5 shall be used to determine the particulate emissions.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

Opacity monitoring shall be performed by a certified visible emissions observer at least once per year during operation of the boiler. The calculated particulate and sulfur dioxide emissions and natural gas usage rates shall be monitored to ensure compliance with the emission limitations listed above.

5. Specific Record Keeping Requirements:

Records shall be maintained of the annual opacity measurements as required by this permit. Records shall be maintained of the calculated particulate and sulfur dioxide emission rates, and the monthly natural gas usage rate.

6. Specific Reporting Requirements:

Any exceedance in the particulate or sulfur dioxide emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

10 (S-10) -**Boiler #2:**

Description:

Cleaver Brooks boiler with a natural gas fuel usage capacity of 36 mmBTU/hr. Construction commenced - February, 1992.

APPLICABLE REGULATIONS:

401 KAR 59:015 - New indirect heat exchangers.

1. Operating Limitations:

None.

2. Emission Limitations:

Particulate emissions shall not exceed 1 ton per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Sulfur dioxide emissions shall not exceed 1 ton per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity except for emissions during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations, and that a maximum of 40% opacity shall be permissible, for not more than 6 consecutive minutes in any 60 consecutive minutes, during cleaning the fire box or blowing soot.

The particulate and sulfur dioxide emission rates shall be calculated as follows:

Particulate Emission Rate = Natural gas usage rate (in million cubic feet/month)

(tons/month) x Particulate Emission Factor (in lbs particulates/million

cubic feet) / 2000 (lbs/ton)

Sulfur Dioxide Emission Rate = Natural gas usage rate (in million cubic feet/month) x

(tons/month) Sulfur Dioxide Emission Factor (in lbs sulfur

dioxide/million cubic feet) / 2000 (lbs/ton)

The particulate emission factor used shall be 5 lbs/million cubic feet of natural gas used and the sulfur dioxide emission factor used shall be 0.6 lbs/million cubic feet of natural gas used. These emission factors shall be replaced by the numbers calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the annual observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above, a stack test shall be conducted to determine the emission factor used to calculate the particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval for the test procedures. Method 5 shall be used to determine the particulate emissions.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

Opacity monitoring shall be performed by a certified visible emissions observer at least once per year during operation of the boiler. The calculated particulate and sulfur dioxide emissions and natural gas usage rates shall be monitored to ensure compliance with the emission limitations listed above.

5. Specific Record Keeping Requirements:

Records shall be maintained of the daily opacity measurements as required by this permit. Records shall be maintained of the calculated particulate and sulfur dioxide emission rates, and the monthly natural gas usage rate.

6. Specific Reporting Requirements:

Any exceedance in the particulate or sulfur dioxide emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

11 (S-21) - **Z-Mill #2 - Cold Rolling Mill:**

Description:

Sedzimer Cluster Mill with a maximum processing capacity of 35 tons of steel coil per hour using 17.5 gallons of rolling oil per hour and having a deflector filter, with a control efficiency of 95%, to control particulate oil emissions.

Construction commenced - January, 1995.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. **Operating Limitations:**

None.

2. Emission Limitations:

Particulate emissions shall not exceed 25 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

VOC emissions shall not exceed 100 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate and VOC emission rates shall be calculated as follows:

Particulate Emission Rate = Rolling oil usage rate (in gallons/month) x Controlled

(tons/month) Particulate Emission Factor (in lbs/gallon of rolling oil used)/

2000 (lbs/ton)

VOC Emission Rate =Rolling oil usage rate(in gallons/month) x VOC Emission (tons/month) Factor (in lbs/gallon of rolling oil used) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.325 lbs/gallon of rolling oil used. The VOC emission factor used shall be 1.3 lbs/gallon of rolling oil used. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. <u>Testing Requirements:</u>

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

The calculated particulate emissions, VOC emissions, and rolling oil usage rates shall be monitored to ensure compliance with the emission limits listed above.

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the daily weekly and quarterly measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records of the calculated particulate emission rate, rolling oil usage rate, and hours of operation of this unit shall be maintained at the source. In addition, a log of the visual inspection of the filter shall be maintained at the source indicating the date of each inspection and whether the filter is in proper working condition.

Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The deflector filter used as the control equipment shall be inspected to ensure its proper operation. Inspection of the deflector filter shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filter to determine whether they are in proper working condition. The deflector filter shall be operated at all times that the rolling mill is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

22 (S-25) - <u>Slab Grinder:</u>

Description:

A slab grinder with a maximum capacity of 135 tons of steel per hour having a baghouse, with a control efficiency of 98%, to control particulate emissions.

Construction commenced - May 1996.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. **Operating Limitations:** None.

2. Emission Limitations:

Particulate emissions shall not exceed 5 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate emission rates shall be calculated as follows:

Particulate Emission Rate = Steel processing rate (in tons of steel processed/month) x
(tons/month) Controlled Particulate Emission Factor(in lbs/ton of steel

processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.00695 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

The calculated particulate emissions and steel processing rates shall be monitored to ensure compliance with the emission limitations listed above.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit

Records shall be maintained of the calculated particulate emission rates, the monthly steel processing rate, and the monthly hours of operation. In addition, a log of the baghouse inspection shall be maintained at the source indicating the date of each inspection and whether the control is in proper working condition.

Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The baghouse used as the control equipment shall be inspected to ensure its proper operation. Inspection of the baghouse shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the bags to determine whether they are in proper working condition. The baghouse shall be operated at all times that the grinder is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

23 (S-22) - Reheat furnace:

Description:

A Stein Heurty reheat furnace with a maximum processing rate of 135 tons of steel per hour and a maximum natural gas usage rate of 169 mmBTU/hr.

Construction commenced - May 1996.

APPLICABLE REGULATIONS:

None.

1. Operating Limitations:

Natural gas usage shall not exceed 1480 mm scf per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Compliance may be demonstrated through monitoring and recordkeeping as specified below.

2. <u>Emission Limitations:</u>

None.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

The natural gas usage shall be monitored to ensure compliance with the operating limitations listed above.

5. Specific Record Keeping Requirements:

The usage of natural gas in this furnace shall be recorded monthly. Records shall also be maintained of the 12 month rolling period natural gas usage.

6. Specific Reporting Requirements:

Any exceedance in the 12 month rolling period natural gas usage over the limit stated in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. Following an exceedance, the company shall submit, within 30 days of the end of the month, the rolling 12 month average of the gas usage at this furnace, for a period of at least 12 months.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

24 (S-24) - Roughing Mill:

Description:

A Hitachi roughing mill with a maximum capacity of 135 tons of steel per hour having a centrifugal dust collection system, with a control efficiency of 91%, to control particulate emissions. Construction commenced - May 1996.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. Operating Limitations:

None.

2. Emission Limitations:

Particulate emissions shall not exceed 53 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = Steel processing rate (in tons of steel processed/month) x
(tons/month) Controlled Particulate Emission Factor (in lbs/ton of steel processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.0886 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

The calculated particulate emissions and steel processing rates shall be monitored to ensure compliance with the emission limitations listed above.

5. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of each exceedance.

Records shall be maintained of the calculated particulate emission rates, the monthly steel processing rates, and the monthly hours of operation. In addition, a log of the visual inspections of the control equipment shall be maintained at the source indicating the date of each inspection and whether the control equipment is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. **Specific Control Equipment Operating Conditions:**

The centrifugal particulate controls used as the control equipment shall be inspected to ensure its proper operation. Inspection of the centrifugal particulate controls shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the inlet and outlet ducting of the controls, as well as their general condition, to determine whether they are in proper working condition. The controls shall be operated at all times that the roughing mill is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (S-22A, S-23b, S26) - Finishing Mill:

Description:

A Hitachi finishing mill (Steckel) coiler, with two 6 mmBTU/hr natural gas burners, and with a maximum capacity of 135 tons of steel per hour equipped and having a Busch centrifugal dust collection system, with a control efficiency of 91%, to control particulate emissions. Construction commenced - May 1996.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. **Operating Limitations:**

None.

2. **Emission Limitations:**

Particulate emissions shall not exceed 53 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.

Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

(tons/month)

Particulate Emission Rate = [Steel processing rate (in tons of steel processed/month) x Controlled Steel Particulate Emission Factor (in lbs/ton of steel processed) + Natural gas usage rate (in million cubic feet/month) x Natural Gas Particulate Emission Factor (in lbs particulates/million cubic feet)] / 2000 (lbs/ton)

The controlled steel particulate emission factor used shall be 0.0886 lbs/ton steel processed and the natural gas particulate emission factor used shall be 5 lbs/million cubic feet. These emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

The calculated particulate emissions, steel usage, and natural gas usage rates shall be monitored to ensure compliance with the emissions limits listed above.

5. **Specific Record Keeping Requirements:**

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit

Records shall be maintained of the calculated particulate emission rates, the monthly steel processing rates, and the monthly hours of operation. In addition, a log of the visual inspections of the control equipment shall be maintained at the source indicating the date of each inspection and whether the control equipment is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The centrifugal particulate controls used as the control equipment shall be inspected to ensure its proper operation. Inspection of the centrifugal particulate controls shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the inlet and outlet ducting of the controls, as well as their general condition, to determine whether they are in proper working condition. The controls shall be operated at all times that the finishing mill is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (26)- Annealing Furnace

Description:

An annealing furnace with a maximum processing rate of 40 tons of stainless steel input per hour, a maximum natural gas usage rate of 16.5 mmBtu/hr, and Ultra-low NOx burners used to control nitrogen oxide emissions.

Construction Commenced: September 10, 1999

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.

1. Operating Limitations:

None

2. Emission Limitations:

- a) Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
- b) Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed 2.34 pounds per hour.[401 KAR 59:010, Section 3(2)]
- c) Total nitrogen oxide emissions : See Section D.

Compliance Demonstration Method:

To provide reasonable assurance that the particulate matter emission limitations are being met, the permittee shall monitor the amount of process weight added to the annealing furnace. The process weight shall be determined as the average hourly tons added to the emission unit averaged over a one-month period. Average particulate emissions shall be calculated as follows:

$$PE = (PW \times PEF)$$

Where PE = Particulate emissions in pounds per hour

PW = process weight in tons per hour

PEF = particulate emission factor in pounds per ton of process weight as found in the emissions inventory system.

The nitrogen oxide emission rate for this emission point shall be calculated as follows: Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (in mmscf/month) x 1000 mmBtu/mmscf x Controlled Nitrogen Oxide Emission Factor (in lbs/mmBtu)

The controlled nitrogen oxide emission factor used shall be 0.0845 lb/mmBtu of heat input. This emission factor shall be replaced by the number calculated whenever an

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emissions test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

2. Testing Requirements:

None

4. **Specific Monitoring Requirements:**

In accordance with regulation 401 KAR 50:035, Permits, Section 7(1)(c)2, the permittee shall perform a qualitative visual observation of the opacity from the stack at least once per month. If the opacity is perceived or believed to exceed the standard, the permittee shall determine the opacity of emissions using U.S. EPA Reference Method 9, and make any necessary repairs to bring the visible emissions into compliance. The permittee shall monitor the process weight, natural gas usage rate and the calculated nitrogen oxide emissions.

5. **Specific Record Keeping Requirements:**

In accordance with regulation 401 KAR 50:035, Permits, Section 7(1)(d)2, the permittee shall keep records of the monthly qualitative opacity readings, the natural gas usage, the calculated NOx emission rates and the amount of process weight processed by the emission unit.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

28 (28)- Plate Pickling Section

Description:

Acid pickling of stainless steel using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of stainless steel input per hour and the use of a scrubber for control of nitrogen oxides, nitric acid, and hydrofluoric acid.

Construction Commenced: September 10, 1999

APPLICABLE REGULATIONS:

None.

1. **Operating Limitations:**

None

2. Emission Limitations:

Total nitrogen oxide emissions: See Section D.

The nitrogen oxide emission rate for this point shall be calculated as follows:

NOx Emission Rate = NO_x concentration in exit stream (in ppm by volume) x

(tons/month) 8.01E-07 (lbs/ft 3 /ppm by volume) x 176,573.5 (ft 3 /hr) x hours

of operation per month (hrs/month) x 0.0005 (tons/lb)

The nitrogen oxide concentration used shall be 100 ppm by volume based on vendor specifications. This specified concentration shall be replaced by the concentration from an emissions test or other modification, approved by the Division. Records of any such change in the concentration used shall be maintained at the source.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The average nitric acid make-up rate and the calculated nitrogen oxide emissions for the 12-month rolling period shall be monitored to ensure continuous compliance with the operating and emissions limitations listed above.

5. Specific Recordkeeping Requirements:

Records shall be kept at the source of the average hourly nitric acid make-up rate calculated from the weekly and monthly usage rates and hours of operation per week and month, respectively. Records of the monthly calculated NOx emission rates for the 12-month rolling period shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

Any exceedance in the NOx emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 6 of this permit. In addition, the owner or operator shall certify, annually, whether the NOx measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. **Specific Control Equipment Operating Conditions:**

The scrubber shall be operated at all times that the pickling unit is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

57(26) Electric Arc Furnace (EAF) and the associated dust handling equipment Description:

This emission point covers emissions due to charging, melting, and tapping. The processing rate is 154 tons per batch and 7566 batches per year. The control equipment is a direct evacuation control system consisting of ductwork which draw the emissions from the furnace to a baghouse. The furnace is also equipped with a doghouse and an overhead canopy hood vented to the same baghouse. Construction Commenced: November 1, 1999.

58(27) <u>Argon Oxygen Decarburization (AOD) Vessel</u> Description:

The argon-oxygen decarburization vessel is used for the chemical refining of the stainless steel. The processing rate is 165 tons per batch and 7062 batches per year. The emissions from this process will be vented to a baghouse. Construction Commenced: November 1, 1999.

APPLICABLE REGULATIONS:

401 KAR 60:005, 40 CFR Part 60 standards of performance for new stationary sources, incorporating Federal Regulation 40 CFR 60, Subpart AAa, Standards of performance for steel plants: electric arc furnaces and argon-oxygen decarburization vessels constructed after August 7, 1983, by reference

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

The liquid steel production rates shall not exceed 154 tons per hour for the EAF and 165 tons per hour for the AOD.

All stainless steel scrap shall contain low concentrations of impurities.

2. Emission Limitations:

- a. The EAF baghouse shall not emit pollutants in excess of the following self-imposed/BACT limitations averaged over three heats:
 - i. Particulate emissions: 13.94 pounds per hour.
 - ii. Carbon monoxide: 2 pounds per ton and 265.76 pounds per hour.
 - iii. Nitrogen dioxide: 0.54 pound per ton and 71.84 pounds per hour.
 - iv. Volatile organic compound: 0.150 pound per ton and 19.95 pounds per hour.
 - v. Lead: 0.001 pound per ton and 0.167 pound per hour.
 - vi. Graphite electrode sulfur content shall not exceed 0.02%.
- b. The AOD baghouse shall not emit pollutants in excess of the following self-imposed/BACT limitations averaged over three heats:
 - i. Particulate emissions: 16.98 pounds per hour.
 - ii. Carbon monoxide: 2.06 pounds per ton and 273.75 pounds per hour.
 - iii. Nitrogen dioxide: 0.578 pound per ton and 76.83 pounds per hour.
 - iv. Lead: 0.002 pound per ton and 0.204 pound per hour.
- c. Visible emissions from the EAF and AOD control devices shall not equal or exceed 3% opacity each.
- d. Visible emissions from the melting shop shall not exhibit 6% opacity or greater.
- e. Visible emissions from dust handling equipment shall not equal or exceed 10% opacity.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

- a. Stack tests shall be conducted as specified in Section G(d)5, to determine compliance with the allowable particulate, NO_x, CO, lead, and VOC (EAF baghouse only) emission rates, as listed in this permit, from the EAF and AOD baghouses. The permittee shall notify the Division of the Performance Test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance (See Section D). Annual performance tests shall also be performed within 90 calendar days of the anniversary dates of the initial performance tests for particulate, NO_x, CO, lead, and VOC (EAF baghouse only). If two consecutive annual tests result in specified emissions being less than or equal to 75% of the standard for that pollutant, specified herein, then no additional testing shall be required for that pollutant during the term of this permit.
- b. Performance tests shall be performed in accordance with methods referenced in 401 KAR 50:015, Documents incorporated by reference, for the EAF and AOD baghouses to determine compliance with the appropriate pollutant concentration limitations. The sampling time and sample volume for particulates for each run shall be at least 4 hours and 4.50 dscm (160 dscf) and when a single EAF or AOD vessel is sampled, the sampling time shall include an integral number of heats.
- c. During the performance test, no gaseous diluents shall be added to the effluent gas stream after the fabric in the control equipment, unless the amount of dilution is separately determined and considered in the determination of the emissions.
- d. When emissions from the EAF or AOD are combined with emissions from facilities not subject to the provisions of this regulation, but controlled by a common capture system and control device, the permittee shall use either or both of the following procedures during a performance test:
 - i. Determine compliance using the combined emissions.
 - ii. Use a method that is approved by the Division and that compensates for the emissions from the facilities not subject to the provisions of this subpart.
- e. When emissions from the EAF or AOD are combined with emissions from facilities not subject to the provisions of this regulation, the permittee shall demonstrate compliance with the melt shop opacity based on emissions from only the affected facilities
- f. Method 9 shall be used to determine compliance with the opacity limitations.
- g. To demonstrate compliance, test runs shall be performed concurrently, unless inclement weather interferes.
- h. The performance test shall be used to establish the minimum control system fan amperage and all damper positions, during all periods in which the hood is operated for the purpose of capturing emissions from the EAF or AOD.
- i. During the performance test, the permittee shall monitor the following information for all heats covered by the test:
 - i. Charge weights and materials, and tap weights and materials;
 - ii. Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside an EAF when direct-shell evacuation control systems are used;
 - iii. Control device operation log; and
 - iv. Reference Method 9 data.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

j. The owner or operator may petition the Division to approve further testing of particulate emissions from the baghouse whenever the owner or operator can demonstrate to the Division's satisfaction that the EAF or AOD operating conditions upon which the parameters were established are no longer applicable. Any such petition shall be made at least 30 days prior to the proposed performance test and shall include all the procedures that will be used to determine compliance.

4. Specific Monitoring Requirements:

- a. The control system fan amperes shall fall within the same range of values recorded during the latest performance test (See testing requirements). The permittee shall maintain records of the control system fan motor amperes and damper positions on a once-per-shift basis. However, the permittee shall have the option of installing, calibrating, and maintaining a monitoring device that continuously records the volumetric flow rate at the baghouse inlet. A shop opacity compliance demonstration shall be performed to establish volumetric flow rate and damper positions.
- b. The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system, including pressure sensors, dampers, and damper switches. This inspection shall include observations of the physical appearance of the equipment, including presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion. Deficiencies shall be noted and proper maintenance performed.
- c. The permittee shall conduct daily visual emissions observations as an alternative to furnace static pressure monitoring. Under the alternative, the permittee shall perform shop opacity observations once per day during a meltdown and refining period in order to monitor the pressure of the free space inside the EAF.
- d. A certified visible emissions observer shall read visible emissions as follows:
 - i. Visible emission observations from the baghouse shall be conducted at least once per day when the furnace is operating in the melting and refining period.
 - ii. Visible emission observations from the melt shop shall be conducted at least once per day for a period of six months from the issuance date of this permit. If no visible emission exceedances were recorded during a six month period, then the permittee shall subsequently conduct the observations on a once per month basis. However, if the permittee has an opacity exceedance during the first six months of monitoring, then the permittee shall continue monitoring opacity based on a daily basis until a six months monitoring period free of any opacity exceedances has been achieved.
 - iii. Visual emission observations shall be taken in accordance with Method 9 and, for at least three 6-minute periods, the opacity shall be recorded for each point(s) where visible emissions are observed.
 - iv. Where it is possible to determine that a number of these visible emission sites relate to only one incident of visible emissions, one set of three 6-minute observations shall be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- e. The permittee shall maintain and operate devices, which continuously monitor and record the NO_X, CO, and VOC (EAF baghouse only) concentrations and flow rates of the gases in the ducts leading to the baghouses, or other approved locations. The NO_X, CO, and VOC (EAF baghouse only) monitors shall be operated in compliance with performance specifications 2 and 4, respectively, as contained in 40 CFR Part 60, Appendix B. The permittee shall follow the applicable quality assurance procedures contained in 40 CFR Part 60, Appendices C, D, and F.
- e. If the permittee demonstrates to the Division, and the Division concurs, that emissions for a year are shown to be less than or equal to 85% of the hourly standard for a pollutant specified herein based upon continuous emissions monitoring systems (CEM) data, then the permittee may discontinue collection of the hourly CEM concentration data for that pollutant. However, if later annual performance testing shows that emissions for that pollutant are greater than 85% of the hourly standard, then the hourly CEM data collection must be resumed.

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the following:

- a. The control system fan motor amperes and damper positions on a once-per-shift basis.
- b. The monthly operational status inspections of the equipment that is important to the performance of the total capture system. Deficiencies shall be noted.
- c. Opacity readings.
- d. The daily processing rates of the EAF and AOD.
- e. The hourly concentration and flowrate data from the CEM.

6. Specific Reporting Requirements:

- a. The permittee shall record and report opacity readings from the baghouse for any six-minute average that is in excess of 3% opacity to the Florence Regional Office semi-annually.
- b. The permittee shall operate the control system fan motor amperes at values not to exceed plus or minus 15% of the established value. Values not within this range may be considered by the Division to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Florence Regional Office semi-annually.
- c. The permittee shall monitor the melt shop opacity on a daily basis as an alternative to continuously monitoring the furnace static pressure. The daily shop opacity readings in excess of 6% shall be reported to the Florence Regional Office semi-annually.
- d. The permittee shall obtain approval from the Division of the procedure(s) that will be used to determine compliance for the standard under 60.275a (b)(2) or a combination of (b)(1) and (b)(2) of Section 60.275a (b). Notification of the procedure(s) to be used must be postmarked 30 days prior to the performance test.
- e. The performance test report required by Section 60.276a (f), shall include the information specified in Section 60.276a (f) (1) (22).
- f. The permittee shall report any opacity exceedances to the Florence Regional Office in the semi-annual report.
- g. The permittee shall report CEM data of flowrate and concentration quarterly.

7. Specific Control Equipment Operating Conditions:

The baghouse shall be operated at all times that the melt shop is in operation.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

31 (31) Ferro Alloy/ Flux Addition System

Description:

This addition system automatically supplies flux materials and ferro alloys to the EAF and AOD directly from their storage compartments at a processing rate 528 tons per hour. Particulate emissions shall not exceed 1.44 pounds per hour. (Self-imposed.) The control equipment is a baghouse. Construction Commenced: November 1, 1999.

32 (32) <u>Continuous Caster with Torch Cutting</u>

Description:

The continuous caster has a processing rate of 165 tons per hour. Particulate emissions shall not exceed 1.77 pounds per hour. (Self-imposed.) The combined emission limitations for carbon monoxide and nitrogen dioxide are 0.5235 pound per hour and 0.6304 pound per hour, respectively averaged over three heats. (Self-imposed.) The caster is equipped with an oxy-fueled torch cutting machine and a baghouse to control particulate emissions generated during pouring and torch cutting. Construction Commenced: November 1, 1999.

33 (33) <u>Slag Processing</u>

Description:

The processing rate of the slag processing operation is 33 tons/hr. Particulate emissions shall not exceed 0.81 pounds per hour. (Self-imposed.) This process is vented to a baghouse. Construction Commenced: November 1, 1999.

34 (34) Lime Hopper

Description:

The lime hopper has a processing rate of 80 tons per hour. The hopper is vented to the EAF baghouse (emission point #57) with a combined particulate emissions limitation of 13.94 pounds per hour. (Self-imposed.) Construction Commenced: November 1, 1999.

36 (36) Receiving Bin/Filling Station

Description:

The processing rate for this emission point is 132 tons per hour. This operation is vented to the EAF baghouse (emission point #57) with a combined particulate emissions limitation of 13.94 pounds per hour. (Self-imposed.) Construction Commenced: November 1, 1999.

APPLICABLE REGULATIONS:

401 KAR 59:010 – New process operations (State Origin).

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

None.

2. Emission Limitations:

- a. Visible emissions shall not equal or exceed 20 percent opacity, as determined by using Reference Method 9, Appendix A, 40 CFR 60.
- b. Visible emissions shall not equal or exceed 3% opacity for the common baghouse associated with emission point 36(36).

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SECTION B EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Hourly particulate emissions for each emission point as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed the limit set forth.

Compliance Demonstration: To provide reasonable assurance that the particulate matter emission limitations are being met, the permittee shall monitor the amount and type of process weight added to each emissions unit. The 3-hour average process weight shall be equal to the average hourly tons added to each emission unit averaged over 24 hours. Particulate emissions shall be calculated as follows:

 $PE = PW \times PEF$

Where PE = Particulate emissions in lbs/hr, PW = process weight in tons/hr and PEF = EIS particulate emission factor in lbs/ton of process weight.

3. Testing Requirements: None.

Specific Monitoring Requirements: 4.

To provide reasonable assurance that the visible emission limitations are being met the permittee shall:

- i) Determine the opacity of emissions during operation from each stack or vent by Reference Method 9 quarterly, or more frequently if requested by the Division.
- ii) Perform a qualitative visual observation of the opacity of emissions from each stack/vent on a daily basis and maintain a log of the observation. The log shall note:
 - 1) whether any air emissions (except for water vapor) were visible from the vent/stack.
 - 2) all emission points from which visible emissions occurred, and
 - 3) whether the visible emissions were normal for the process.
- iii) Determine the opacity of emissions by Reference Method 9 if qualitative visible emissions from any stack/vent is perceived or believed to exceed the applicable standard.

5.

<u>Specific Record Keeping Requirements:</u>
Records shall be maintained for each point of the visual observations, quarterly Reference Method 9 tests, the hours of operation, and the amount of process weight added to each emissions unit.

6. **Specific Reporting Requirements:**

Any exceedance over the opacity or particulate emission limits as stated in this permit shall be reported to the Florence Regional Office as specified in Section F.6.b. Following an exceedance, the permittee shall continue to submit, for a period of 2 months, the daily visible emission readings and the monthly average process weight rates of this emission point, within 30 days of the end of each month. The company shall certify to the Florence Regional Office, annually, whether a daily visible emission survey was conducted for this emission point, and whether the emission point was in compliance with the applicable opacity requirements.

Specific Control Equipment Operating Conditions: 7.

The fabric filters shall be operated and maintained according to manufacturer's specifications.

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (48) Paved Roadways

Construction Commenced: November 1, 1999.

APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

STATE-ORIGIN APPLICABLE REGULATIONS:

401 KAR 63:010 – Fugitive Emissions, applicable to each operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the regulations of the Division for Air Quality.

1. **Operating Limitations:**

None.

2. Emission Limitations:

None.

3. Testing Requirements:

None

4. **Specific Monitoring Requirements:**

None

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the dates that it vacuumed, swept, and applied water/dust suppressants to roadways.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

The permittee shall employ a combination of the following to control fugitive dust emissions: sweeping for paved roads, watering and the use of dust suppressants. (Work Practice BACT.)

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SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

59(28) <u>Argon Oxygen Decarburization Preheater</u>

Description:

This natural gas fired preheater has a maximum burner capacity of 17.06 MMBtu per hour, equipped with a low NOx burner to control nitrogen oxide emissions. The preheater is vented to the AOD baghouse (emission point #58(27)). Construction Commenced: November 1, 1999.

49-56 (49-56) 8 Ladle Pre-heaters

Description:

The eight natural gas fired pre-heaters each have a maximum burner capacity of 10.43 MMBtu per hour and are equipped with a low NOx burner to control nitrogen oxide emissions. The pre-heaters are vented to the AOD baghouse (emission point #58(27)).

Construction Commenced: November 1, 1999.

APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

None.

2. Emission Limitations:

See limitations for 58(27).

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

None.

5. Specific Record Keeping Requirements:

None.

6. Specific Reporting Requirements:

None.

7. Specific Control Equipment Operating Conditions:

See Section E.

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SECTION C- INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 50:035, Section 5(4). While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimum level of periodic monitoring may be necessary.

| | <u>Description</u> | Generally Applicable Regulation |
|----|---|-----------------------------------|
| 1. | T-01: 2 Hydrofluoric acid (70%) storage tanks | Generally applicable regulations. |
| 2. | T-02: 2 Nitric acid (68%) storage tanks | Generally applicable regulations. |
| 3. | T-03: 1 Sodium hydroxide (25%) storage tank | Generally applicable regulations. |
| 4. | T-04: 1 Urea storage tank | Generally applicable regulations. |
| 5. | T-05: 1 Diesel storage tank | Generally applicable regulations. |
| 6. | T-06: Waste water lime Day #1 | Generally applicable regulations. |
| 7. | T-07: Waste water lime Day #2 | Generally applicable regulations. |
| 8. | C-01: AP lines cooling tower | Generally applicable regulations. |

Regulation 40 CFR 63, Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers does apply and chromium-based water treatment chemicals shall not be used.

Records shall be maintained of the chemical compositions (MSDS sheets) for any water treatment chemical used in the cooling towers. Any water treatment chemical that is used in the cooling tower and is later found to have chromium shall be reported to the Division as promptly as possible.

9. C-02: Z-mill #1 cooling tower Generally applicable regulations.

Regulation 40 CFR 63, Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers does apply and chromium-based water treatment chemicals shall not be used.

Records shall be maintained of the chemical compositions (MSDS sheets) for any water treatment chemical used in the cooling towers. Any water treatment chemical that is used in the cooling tower and is later found to have chromium shall be reported to the Division as promptly as possible.

10. W-01: Scale pit water treatment Generally applicable regulations.

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SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

Description

Generally applicable regulations

11. C-03: Z-mill #2 cooling tower

Generally applicable regulations.

Regulation 40 CFR 63, Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers does apply and chromium-based water treatment chemicals shall not be used.

Records shall be maintained of the chemical compositions (MSDS sheets) for any water treatment chemical used in the cooling towers. Any water treatment chemical that is used in the cooling tower and is later found to have chromium shall be reported to the Division as promptly as possible.

- 12. V-01 to V-09: Fugitive emissions from 3 mig Generally applicable regulations. & 1 electric arc welders, and an alkali scrubber.
- 13. EP #27- Shot Blaster for Plate Line

401 KAR 59:010

- 14. EP #29- Tundish Preheater (6.16 MMBtu/hr) 401 KAR 51:017 Vented to continuous caster baghouse (EP #32) with a combined particulate emissions limitation of 1.77 pounds per hour. (Self-imposed.)
- 15. EP #30- SEN Preheater (0.16 MMBtu/hr) 401 KAR 51:017 Vented to continuous caster baghouse (EP #32) with a combined particulate emissions limitation of 1.77 pounds per hour. (Self-imposed.)
- 16. EP #37- Sludge Disposal 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 6.03x10⁻⁵ pounds per hour. (Self-imposed.)
- 401 KAR 63:010, 401 KAR 51:017 17. EP #38- Scrap Unloading Particulate emissions shall not exceed 5.27x10⁻⁶ pounds per hourbased on a 90% capacity. (Self-imposed.)
- 18. EP #39- Evaporation Cooler EAF 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 0.81 pounds per hour. (Self-imposed.)
- 19. EP #40- Evaporation Cooler AOD Converter 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 0.022 pounds per hour. (Self-imposed.)
- 20. EP #41- Cooling Tower Particulate emissions shall not exceed 0.17 pounds per hour. (Self-imposed.)

401 KAR 63:010, 401 KAR 51:017

Regulation 40 CFR 63, Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers does apply and chromium-based water treatment chemicals shall not be used.

Records shall be maintained of the chemical compositions (MSDS sheets) for any water treatment chemical used in the cooling towers. Any water treatment chemical that is used in the cooling tower and is later found to have chromium shall be reported to the Division as promptly as possible.

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SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

Description

Generally applicable regulations

- 21. EP #42- Evaporation Cooler/ Off Gas 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 0.082 pounds per hour. (Self-imposed.)
- 22. EP #43- Cooling Tower/ Miscellaneous 401 KAR 63:010, 401 KAR 51:017
 Particulate emissions shall not exceed 0.040 pounds per hour. (Self-imposed.)
 Regulation 40 CFR 63, Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers does apply and chromium-based water treatment chemicals shall not be used.
 Records shall be maintained of the chemical compositions (MSDS sheets) for any water treatment chemical used in the cooling towers. Any water treatment chemical that is used in the
- 23. EP #44- Cooling Tower- CC

as possible.

401 KAR 63:010, 401 KAR 51:017

Particulate emissions shall not exceed 0.057 pounds per hour. (Self-imposed.)

Regulation 40 CFR 63, Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers does apply and chromium-based water treatment chemicals shall not be used.

cooling tower and is later found to have chromium shall be reported to the Division as promptly

Records shall be maintained of the chemical compositions (MSDS sheets) for any water treatment chemical used in the cooling towers. Any water treatment chemical that is used in the cooling tower and is later found to have chromium shall be reported to the Division as promptly as possible.

- 24. EP #45- Mold Cooling System 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 0.049 pounds per hour. (Self-imposed.)
- 25. EP #46- Spray and Open Machine Cooling System 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 0.057 pounds per hour. (Self-imposed.)
- 26. EP #47- Closed Machine Cooling System 401 KAR 63:010, 401 KAR 51:017 Particulate emissions shall not exceed 0.034 pounds per hour. (Self-imposed.)

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SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

- 1. Total NO_x emissions from emission points 26(26) and 28(28) shall not exceed 8 tons per 12 month rolling average. This monthly total shall be defined as the total monthly emissions from point 26(26) plus the total monthly emissions from point 28(28). Self-imposed to preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration to ambient air.
- 2. Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but are not limited to the following:
 - a. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts.
 - b. Installation and use of hoods, fans, and fabric filters, to enclose and vent the handling of dusty materials, or use of water sprays or other measures to suppress the dust emissions during handling.
 - c. Discharge of fugitive dust emissions beyond the property line is prohibited.

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SECTION E – SOURCE CONTROL EQUIPMENT OPERATING REQUIREMENTS

Pursuant to 401 KAR 50:012, Section 1(1) and 401 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the cabinet which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

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SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

- 1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements.
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement;
- 2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 50:035, Permits, Section 7(1)(d)2 and 401 KAR 50:035, Permits, Section 7(2)(c)]
- 3. In accordance with the requirements of Regulation 401 KAR 50:035, Permits, Section 7(2)(c) the permittee shall allow the Cabinet or authorized representatives to perform the following:
 - a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
 - b. Have access to and copy, at reasonable times, any records required by the permit:
 - i. During normal office hours, and
 - ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
 - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
 - i. During all hours of operation at the source,
 - ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
 - iii. During an emergency; and
 - d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
 - i. During all hours of operation at the source,
 - ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
 - iii. During an emergency.
- 4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

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SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- 5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be reported to the division's Florence Regional Office no later than the six-month anniversary date of this permit and every six months thereafter during the life of this permit, unless otherwise stated in this permit. The permittee may shift to semi-annual reporting on a calendar year basis upon approval of the regional office. If calendar year reporting is approved, the semi-annual reports are due January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of Regulation 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to Section 6(1) of Regulation 401 KAR 50:035, Permits. All deviations from permit requirements shall be clearly identified in the reports.
- 6. a. In accordance with the provisions of Regulation 401 KAR 50:055, Section 1 the owner or operator shall notify the Division for Air Quality's Florence Regional Office concerning startups, shutdowns, or malfunctions as follows:
 - 1. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - 2. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.
 - b. In accordance with the provisions of Regulation 401 KAR 50:035, Section 7(1)(e)2, the owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by general condition 6 a. above) to the Division for Air Quality's Florence Regional Office within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by general condition F.5.
- 7. Pursuant to Regulation 401 KAR 50:035, Permits, Section 7(2)(b), the permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date or by January 30th of each year if calendar year reporting is approved by the regional office, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Division for Air Quality's Florence Regional Office and the U.S. EPA in accordance with the following requirements:
 - a. Identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status regarding each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent; and
 - d. The method used for determining the compliance status for the source, currently and over the reporting period, pursuant to 401 KAR 50:035, Section 7(1)(c),(d), and (e).

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SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

e. The certification shall be postmarked by the thirtieth (30) day following the applicable permit issuance anniversary date, or by January 30th of each year if calendar year reporting is approved by the regional office. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality Florence Regional Office 8020 Ewing Blvd., Ste 110 Florence, KY 41042 U.S. EPA Region IV Air Enforcement Branch Atlanta Federal Center 61 Forsyth St. Atlanta, GA 30303-8960

Division for Air Quality Central Files 803 Schenkel Lane Frankfort, KY 40601

- 8. In accordance with Regulation 401 KAR 50:035, Section 23, the permittee shall provide the division with all information necessary to determine its subject emissions within thirty (30) days of the date the KEIS emission report is mailed to the permittee.
- 9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the division by the source or its representative within forty-five days after the completion of the fieldwork.

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SECTION G - GENERAL CONDITIONS

(a) <u>General Compliance Requirements</u>

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of state regulation 401 KAR 50:035, Permits, Section 7(3)(d) and for federally enforceable permits is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

- 2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.
- 3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to Regulation 401 KAR 50:035, Section 12(2)(c);
 - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - c. The Cabinet or the U. S. EPA] determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the division, in writing, information that the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [401 KAR 50:035, Permits, Section 7(2)(b)3e and 401 KAR 50:035, Permits, Section 7(3)(j)]

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SECTION G - GENERAL CONDITIONS (CONTINUED)

5. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [401 KAR 50:035, Permits, Section 7(3)(k)]

- 6. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [401 KAR 50:035, Permits, Section 7(3)(e)]
- 7. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.
- 8. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6). [401 KAR 50:035, Permits, Section 7(3)(h)]
- 9. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 50:035, Permits, Section 8(3)(b)]
- 10. This permit shall not convey property rights or exclusive privileges. [401 KAR 50:035, Permits, Section 7 (3)(g)]
- 11. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.
- 12. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry. [401 KAR 50:035, Permits, Section 7(2)(b)5]
- 13. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders. [401 KAR 50:035, Permits, Section 8(3)(a)]
- Permit Shield: Except as provided in State Regulation 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.
- 15. All previously issued construction and operating permits are hereby subsumed into this permit.
- 16. The validity of this revised permit is contingent upon the permittee's purchase of additional property upon which modeling revealed violations. If said property is not purchased by the permittee within 90 days of the final permit date, this permit revision is null and void.

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SECTION G - GENERAL CONDITIONS (CONTINUED)

(b) <u>Permit Expiration and Reapplication Requirements</u>

This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the division. [401 KAR 50:035, Permits, Section 12]

(c) <u>Permit Revisions</u>

- 1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of Regulation 401 KAR 50:035, Section 15.
- 2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.
- (d) <u>Construction, Start-Up, and Initial Compliance Demonstration Requirements</u> Emission points 26(26)-59(59):
- 1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- 2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up, and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Florence Regional Office in writing, with a copy to the division's Frankfort Central Office, notification of the following:
 - a. The date when construction commenced.
 - b. The date of start-up of the affected facilities listed in this permit.
 - c. The date when the maximum production rate specified in the permit application was achieved.

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SECTION G - GENERAL CONDITIONS (CONTINUED)

3. Pursuant to State Regulation 401 KAR 50:035, Permits, Section 13(1), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or if construction is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

- 4. Operation of the affected facilities for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.
- 5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with Regulation 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Conditions G(d)6 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.
- 6. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the division shall be notified of the actual test date at least ten (10) days prior to the test.

(e) <u>Acid Rain Program Requirements</u>

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) <u>Emergency Provisions</u>

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:

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SECTION G - GENERAL CONDITIONS (CONTINUED)

a. An emergency occurred and the permittee can identify the cause of the emergency;

- b. The permitted facility was at the time being properly operated;
- c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
- d. The permittee notified the division as promptly as possible and submitted written notice of the emergency to the division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e)2, and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken. This requirement does not relieve the source of any other local, state or federal notification requirements.
- 2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement.
- 3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 50:035, Permits, Section 9(3)]
- (g) Risk Management Provisions

The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall:

a. Submit a Risk Management Plan (RMP) and comply with the Risk Management Program. The permittee shall submit the RMP on diskette to:

RMP Reporting Center P.O. Box 3346 Merrifield, VA 22116-3346.

b. Submit additional relevant information if requested by the Division or the U.S. EPA.

(h) Ozone depleting substances

- 1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

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SECTION G - GENERAL CONDITIONS (CONTINUED)

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.

- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- 2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

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SECTION H - ALTERNATE OPERATING SCENARIOS

Not Applicable

SECTION I - COMPLIANCE SCHEDULE

Not Applicable